



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,280	08/27/2003	Andrew E. Modin	60000500-1009	5503

26263 7590 05/06/2005

SONNENSCHN NATH & ROSENTHAL LLP  
P.O. BOX 061080  
WACKER DRIVE STATION, SEARS TOWER  
CHICAGO, IL 60606-1080

EXAMINER

DIXON, MERRICK L

ART UNIT	PAPER NUMBER
----------	--------------

1774

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/649,280

Applicant(s)

MODIN ET AL.

Examiner

Merrick Dixon

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on interview of 4-29-05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 and 20-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-19 and 25-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**MERRICK DIXON**  
**PRIMARY EXAMINER**

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1774

15

During a telephone conversation with Mr. K. Abramov on 4-29-05 a provisional election was made without traverse to prosecute the invention of the composite, claims 11-19 and 25-30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-10 and 20-24 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

16

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

17

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1774

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

18

Claims 11-13,17,18 and 25-28 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Christensen et al ( US 5717191) .

The cited reference teaches the claimed invention including. a laminated composite body comprising a perforated metal foil sheet having a plurality of openings, a fiber ply including a plurality of reinforcing fibers adjacent to the foil sheet and resin material extending through the openings- col 5, lines 46-57; col 6, lines 35-46; col 6, lines 6, line 67; col 8, line 56; col 9, line 1; col 10, lines 25-34; col 11, line 39-60. Concerning claims 12 and 13, the reference teaches similarly placed foil material adjacent the fiber ply layer- fig 2; col 5, lines 46-57. Concerning claim 17, the reference teaches squared openings in col 11, lines 43-44. Concerning claim 18, the reference teaches diamond shaped openings in col 9, lines 7-9. Concerning claim 25, the reference teaches a laminated composite comprising metal foil layer with plurality of gaps, a fiber ply adjacent said foil layer and resin extending the gaps in the metal foil layer, as discussed above. See col 12, lines 19-23, additionally. Concerning claim 26-28, and 30, the reference teaches similar gap widths in col 12, lines 20-22; col 5, line 65. The reference teaches similarly placed foil/fiber plies placements – fig 2.

19

Claims 11-15,18,25,26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Scoles et al (US 5935475).

The cited reference teaches the claimed invention including a laminated composite body comprising a perforated metal foil sheet having a plurality of openings, a fiber ply including a plurality of reinforcing fibers adjacent to the foil sheet and resin material extending through the openings – col 5, lines 45-60; col 8, lines 60-65; col 10, lines 21-34; col 19, lines 27-35; col 19, lines 58-65.

Concerning claim 12 -14, 26 and 27 ,the reference teaches laminated composite of similarly claimed structure-col 10, lines 11-34. The reference teaches nonperforated laminate in col 6, line 34. Concerning claim 18, the reference teaches similar diamond shapes in col 24, line 26; figs 19 and 24. Concerning claim 15, the reference teaches circular opening- figs 22 and 23. Concerning claim 25, the reference teaches a laminated composite body comprising a perforated metal foil sheet having a plurality of openings, a fiber ply including a plurality of reinforcing fibers adjacent to the foil sheet and resin material extending through the openings – col 5, lines 45-60; col 8, lines 60-65; col 10, lines 21-34; col 19, lines 27-35; col 19, lines 58-65.

20

Art Unit: 1774

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21

Claims 1, 14, 15, 16, 19 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen et al ( US 5717191) in view of Scoles et al( US 5935475). The primary reference to Christensen et al was discussed above, inter alia. The primary reference fails to teach non-perforated metal foil material in its laminated composite. The secondary reference to Scoles et al, however, teach that it is known in the art to facilitated such notoriously well known material in laminated composite material as taught by the primary reference with nonperforated metal foil- col 6, line 33-35. It would have been obvious to one of ordinary skill in the art at the time the invention is made to combine the teachings of the secondary reference to Scoles et al and include such solid type foil layers as taught by the secondary reference, in the primary reference, to increase the heating capability of the resulting laminated composite material - col 6, lines 33-34. Concerning claim 29, the primary reference teaches that it is known in the art to have specific gap widths for its respective layers in col 5, line 65. Concerning claim 19, the secondary reference teaches openings with even spacings- col 5, lines 45-59. It is submitted it would have been obvious to the skilled artisan to modify such spacings as claimed, for it is generally held that discovering an optimum value of a result effective variable, such as claimed, involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Concerning claims 15 and 16, the primary reference teaches several shapes openings (including diamond)- col 9, lines 1-3. the secondary references teaches similarly claimed circular openings in figs 22 and 23. The secondary reference teaches various dimensions for its openings as required by claim 16 in col 5, line 58-59. Alternately, it would have been obvious to the skilled artisan to facilitate such dimensions for the openings as such change in sizes involves a mere change in design choices . It has long being held that such changes in design choice is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

22

Applicants who wish to send a facsimile (draft copies) for the examiner's immediate review can do so by using the Examiner's personal fax number at 571-273-1520. The faxing of all papers must conform with the notice published in the Official Gazette, 1096 O.G. 30 ( November 15, 1989). **NOTE: All facsimiles sent to the examiner's personal fax number should be in draft-forms and will be treated as informal. Same facsimiles will not be entered in the related applications unless otherwise agreed and noted by the examiner.**

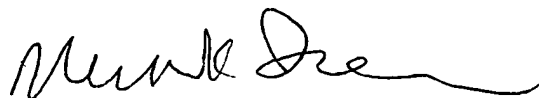
**The fax number for all other fascimile is 703-872-9306.**

Information about **the status of an application** may be obtained from the Patent Information Retrieval system (**Private PAIR**).

Status inquires for **published applications** may be retrieved from either **Private PAIR** or **Public PAIR**. Questions about the PAIR system should be directed to the Electronic Business Center at **866-217-9197**.

Art Unit: 1774

Any questions concerning the instant communication should be directed to Examiner Dixon, at 571-272-1520, Mondays to Thursdays, between 12 noon and 8 PM, eastern time . The examiner's supervisor, Mrs. Rena Dye, can be reached at 571-272-3186.

A handwritten signature in black ink, appearing to read "Merrick Dixon", with a long horizontal flourish extending to the right.

Merrick Dixon

Primary Examiner

Group 1700